

Installation Guide



RGB 460xi/470xi SC Series Installation Guide

Steel City Floorbox-Mounted Interface

Precautions

Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

Caution

Read Instructions • Read and understand all safety and operating instructions before using the equipment.

Retain Instructions • The safety instructions should be kept for future reference.

Follow Warnings • Follow all warnings and instructions marked on the equipment or in the user information.

Avoid Attachments • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

Attention

Lire les instructions • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.

Conservier les instructions • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.

Respecter les avertissements • Observer tous les avertissements et consignes marqués sur le matériel ou présentés dans la documentation utilisateur.

Eviter les pièces de fixation • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

Achtung

Lesen der Anleitungen • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.

Aufbewahren der Anleitungen • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.

Befolgen der Warnhinweise • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.

Keine Zusatzgeräte • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

Precaucion

Leer las instrucciones • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.

Conservar las instrucciones • Conservar las instrucciones de seguridad para futura consulta.

Obedecer las advertencias • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.

Evitar el uso de accesorios • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

Warning

Power sources • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

Power disconnection • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

Power cord protection • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.

Servicing • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

Slots and openings • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.

Lithium battery • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Avertissement

Alimentations • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de le contourner ni de le désactiver.

Déconnexion de l'alimentation • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.

Protection du cordon d'alimentation • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas écrasés ou pincés par des objets.

Réparation-maintenance • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.

Fentes et orifices • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.

Lithium Batterie • Il y a danger d'explosion s'il y a un remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Vorsicht

Stromquellen • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.

Stromunterbrechung • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.

Schutz des Netzkabels • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegestellt werden können.

Wartung • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder andere Gefahren bestehen.

Schlitze und Öffnungen • Wenn das Gerät Schlitze oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Inneren. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.

Litium-Batterie • Explosionsgefahr, falls die Batterie nicht richtig ersetzt wird. Ersetzen Sie verbrauchte Batterien nur durch den gleichen oder einen vergleichbaren Batterietyp, der auch vom Hersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien bitte gemäß den Herstelleranweisungen.

Advertencia

Alimentación eléctrica • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución general con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearla ni eliminarla.

Desconexión de alimentación eléctrica • Para desconectar con seguridad la acometida de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.

Protección del cables de alimentación • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.

Reparaciones/mantenimiento • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario deba acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/ mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.

Ranuras y aberturas • Si el equipo posee ranuras o orificios en su caja/alojamiento, es para evitar el sobrecalentamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.

Batería de litio • Existe riesgo de explosión si esta batería se coloca en la posición incorrecta. Cambiar esta batería únicamente con el mismo tipo (o su equivalente) recomendado por el fabricante. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

USA, Canada, South America, and Central America:

Extron Electronics
1230 South Lewis Street
Anaheim, CA 92805, USA

Europe, Africa, and the Middle East:

Extron Electronics, Europe
Beeldschermweg 6C
3821 AH Amersfoort
The Netherlands

Asia:

Extron Electronics, Asia
135 Joo Seng Road, #04-01
PM Industrial Bldg.
Singapore 368363

Japan:

Extron Electronics, Japan
Daisan DMJ Bldg. 6F,
3-9-1 Kudan Minami
Chiyoda-ku, Tokyo 102-0074
Japan

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

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About this Guide

This guide contains instructions for mounting eight different Extron computer interfaces and an adapter plate in Steel City® floor boxes. The interfaces are standard RGB 400*xi* series interfaces tailored to fit in the different Steel City floor boxes. The Steel City floorbox-mountable interface models are:

- **RGB 460*xi* SC-AFM2** and **RGB 472*xi* SC-AFM2** — 300 MHz (-3dB) bandwidth interfaces configured for installation in an AFM 2 floor box.
- **RGB 460*xi* SC-AFM4** and **RGB 472*xi* SC-AFM4** — 300 MHz (-3dB) bandwidth interfaces configured for installation in an AFM 4 floor box.
- **RGB 464*xi* SC-AFM6** and **RGB 474*xi* SC-AFM6** — 300 MHz (-3dB) bandwidth interfaces with S-video, composite video, unbalanced stereo audio, and RJ-45 pass-through connectors configured for installation in an AFM 6 floor box.
- **RGB 468*xi* SC-AFM6** and **RGB 478*xi* SC-AFM6** — 300 MHz (-3dB) bandwidth interfaces with an opening for three single space (single height) Architectural Adapter Plates (AAPs) configured for installation in an AFM 6 floor box.

The SC-AFM8 adapter plate is a blank faceplate for the AFM 8 floorbox, to which any standard Extron shallow-profile 2-gang, 3-gang, or 4-gang wall mountable device can be mounted. Specifically, the SC-AFM8 will accommodate:

- One 4-gang faceplate product (examples: RGB 468*xi*, RGB 460*xi* Dual, or TP T 468)
- Two 2-gang faceplate products (for example: one RGB 420*xi* and one TP T 460)
- One 2-gang faceplate product (for example: one RGB 460*xi*) and two 1-gang blank plates
- One 3-gang faceplate product (for example: one RGB 464*xi*) and one 1-gang blank plate

In this guide, the terms “RGB 400*xi* SC series interface” or “RGB 470*xi* series interface” and “Interface” are used interchangeably. The term “faceplate” can be any of the interface faceplates or the SC-AFM8 adapter plate.

For information about operating and wiring the interface, refer to the *RGB 400*xi* Series User Manual*, Part #68-542-01, or the *RGB 470*xi* Series User’s Manual*, Part #68-661-01, depending on the specific product you are using.

Installation Overview

CAUTION Installation and service must be performed by authorized personnel only. These products must be used with UL approved electrical boxes.

Install the interface as follows:

- 1 Turn all of the equipment off. Make sure that the computer, the interface, and the output devices (projector/monitor, speakers) are all turned off and disconnected from the power source.
- 2 Select the installation location and install the electrical floorbox. Refer to the documentation that was included with the floorbox.
- 3 Route the cables that connect to the rear of the interface (or the device(s) to be installed in the SC-AFM8 adapter plate).
- 4 Set the gain and DIP switches (or the switch(es) on the rear of the device(s) to be installed in the SC-AFM8 adapter plate). Refer to the RGB 400*xi* Series User Manual, Part #68-542-01, the RGB 470*xi* Series User Manual, Part #68-661-01, (or the appropriate manual(s) for the device(s) to be installed in the SC-AFM8 adapter plate).
- 5 **For the SC-AFM8 adapter plate only**, secure the device(s) to be installed to the front of the faceplate.
- 6 Connect the video, audio, and power cables to the rear of the device. Refer to the RGB 400*xi* Series User Manual, Part #68-542-01, the RGB 470*xi* Series User Manual, Part #68-661-01, (or the appropriate manual(s) for the device(s) to be installed in the SC-AFM8 adapter plate).
- 7 Connect power cords and turn on the projector or monitor and audio device, the interface, and the computer.
- 8 The picture should now appear, and sound should be audible. If not, ensure that all devices are plugged in and receiving power. Check the cabling and switch settings, and make adjustments as needed.
- 9 Disconnect power from all the devices.
- 10 Mount the faceplate into the electrical box. See *Mounting the faceplate to the floorbox* in this manual.
- 11 Restore power to the devices.
- 12 **For the SC-AFM8 adapter plate only**, as necessary, secure blank 1-gang faceplate(s) to the front of the faceplate.

Installation Instructions

CAUTION The interface must be installed into an Underwriters Laboratories (UL) approved Steel City electrical floor box. The floorbox is not included with the interface; the installer is responsible for obtaining and installing the box.

Preparing the site and cables

Choose a location that allows cable runs without interference. Allow enough depth for both the floorbox and the cables. You need to run the conduit (if required by local code) and cables under the floor before installing the interface.

The installation must conform to national and local electrical codes and to the interface's size requirements. Dimensional drawings and actual-size cut-out templates are provided at the end of this guide.

1. Install the floorbox in accordance with the documentation that accompanied the box.
2. Feed cables through the floorbox punch-out holes, and secure them with cable clamps to provide strain relief.
3. Exposed cable shields (braids or foil) are potential sources of short circuits. Trim back and/or insulate shields with heat shrink (figure 1).

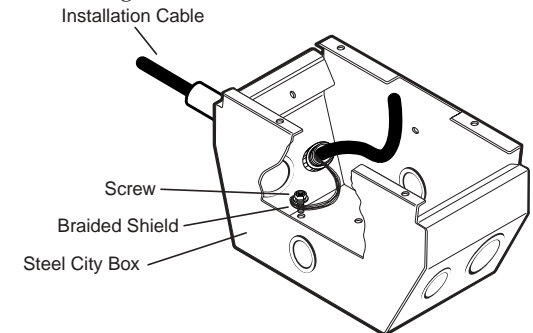


Figure 1 — Grounding outer braided and foil shields, AFM 2 box

CAUTION To prevent short circuits, the outer foil shield can be cut back to the point where the cable exits the cable clamp. Both braided and foil shields should be connected to an equipment ground at the other end of the cable.

4. For the SC-AFM8 adapter plate only, secure the device(s) to be installed to the front of the faceplate with machine screws (figure 2).

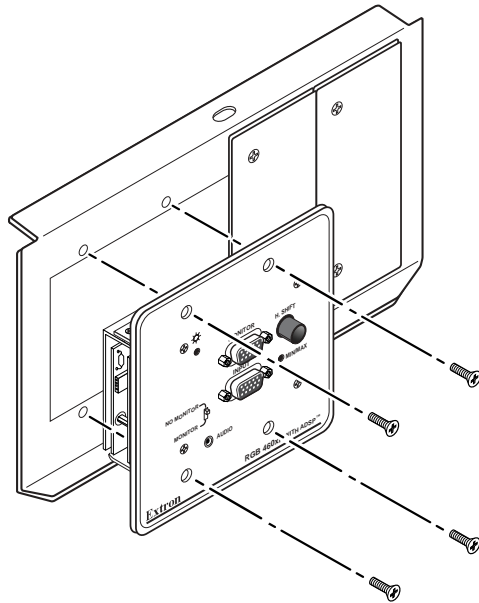


Figure 2 — Securing the device to the face plate, SC-AFM8 only

5. Set the gain and DIP switches (or the switch(es) on the device(s) to be installed in the SC-AFM8 adapter plate) and cable and test the interface or other device before securing the device into the wall box. *The switches and cables will be inaccessible after installation.* Refer to the RGB 400*xi* Series User Manual, Part #68-542-01 (or the appropriate manual(s) for the device(s) to be installed in the SC-AFM8 adapter plate).

Mounting the faceplate to the floorbox

1. Disconnect the power supply to remove power from the interface (or the device connected to the SC-AFM8 adapter plate).
2. If installed, remove the floor box's top panel and trim frame.
3. Place the faceplate through the opening in the floor and into the floorbox. Take care not to damage the cables, which lay behind the interface in the bottom of the box.

4. Mount the faceplate to the knockout box.
 - a. For the RGB 460*xi* SC-AFM2 and RGB 472*xi* SC-AFM2, hook the two locking tabs on the bottom of the faceplate into the slots on the bottom of the box is mounted. Secure the faceplate to the top of the floorbox with the included 8-32 x 1/4" machine screw (figure 3).

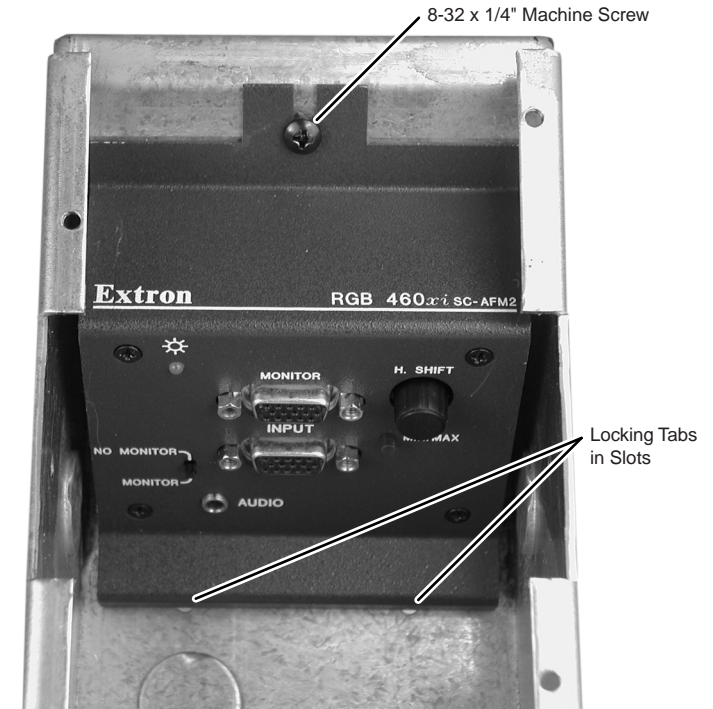


Figure 3 — RGB 460*xi* SC-AFM2 installed

- b. For the RGB 460*xi* SC-AFM4, RGB 472*xi* SC-AFM4, RGB 464*xi* SC-AFM6, RGB 474*xi* SC-AFM6, RGB 468*xi* SC-AFM6, and RGB 478*xi* SC-AFM6, secure the faceplate to either side of the floorbox with the included 10-32 x 3/8" machine screws (top) and 8-32 x 3/8" machine screws (bottom) (figure 4).
- c. For the SC-AFM8 adapter plate, secure the faceplate to the top and bottom of the floorbox with the included 8-32 x 3/8" machine screws (figure 5).

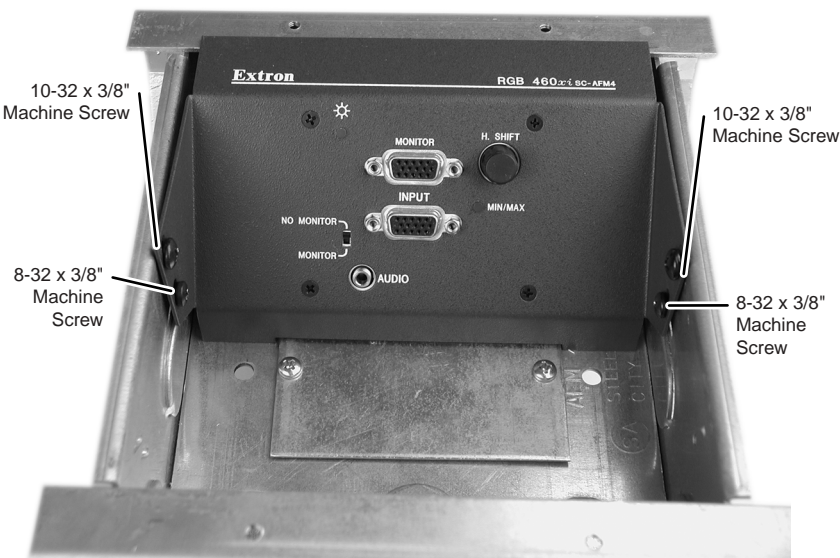


Figure 4 — RGB 460xi SC-AFM4 installed

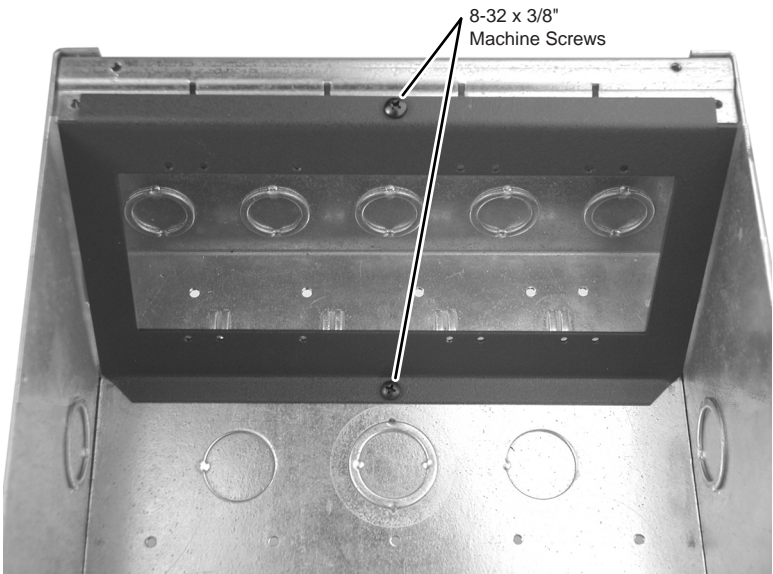


Figure 5 — SC-AFM8 adapter plate installed

5. Install the floor box's top panel and trim frame.
6. Reconnect the power supply.

Specifications

This guide shows power requirements and physical specifications only. For electrical and functional specifications, refer to the RGB 400xi Series User Manual, Part #68-542-01 or the RGB 470xi Series User's Manual, Part #68-661-01, depending on the specific product you are using.

General

Power	12VDC, 0.42 A, 5 watts, external (the power supply is included.)
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non condensing
Rack mount	No, but Steel City floorbox mountable
Enclosure type	Metal
Enclosure dimensions	
RGB 460xi/472xi SC-AFM2	
Plate	2.9" H x 3.5" W (7.2 cm H x 8.9 cm W)
Back enclosure	2.7" H x 3.3" W x 1.1" D (6.9 cm H x 8.4 cm W x 2.8 cm D) (Depth excludes front panel connectors and controls.)
RGB 460xi/472xi SC-AFM4	
Plate	2.9" H x 5.8" W (7.2 cm H x 14.8 cm W)
Back enclosure	2.7" H x 3.3" W x 1.1" D (6.9 cm H x 8.4 cm W x 2.8 cm D) (Depth excludes front panel connectors and controls.)
RGB 464xi/474xi SC-AFM6	
Plate	2.9" H x 8.9" W (7.2 cm H x 22.6 cm W)
Back enclosure	2.7" H x 3.3" W x 1.1" D (6.9 cm H x 8.4 cm W x 2.8 cm D) (Depth excludes front panel connectors and controls.)
RGB 468xi/478xi SC-AFM6	
Plate	2.9" H x 8.9" W (7.2 cm H x 22.6 cm W)
Back enclosure	2.7" H x 3.3" W x 1.1" D (6.9 cm H x 8.4 cm W x 2.8 cm D) (Depth excludes front panel connectors and controls.)
SC-AFM8 adapter plate ..	4.4" H x 9.4" W (11.2 cm H x 23.7 cm W)

NOTE Specifications are subject to change without notice.

Included Parts

These items are included in each order for the indicated interface:

Included parts	Part number
RGB 460 <i>xi</i> SC-AFM2 gray	60-463-01
-or- RGB 460 <i>xi</i> SC-AFM4 gray	60-464-01
-or- RGB 464 <i>xi</i> SC-AFM6 gray	60-465-01
-or- RGB 468 <i>xi</i> SC-AFM6 gray	60-466-01
-or- RGB 472 <i>xi</i> SC-AFM2 gray	60-516-01
-or- RGB 472 <i>xi</i> SC-AFM4 gray	60-517-01
-or- RGB 474 <i>xi</i> SC-AFM6 gray	60-520-01
-or- RGB 478 <i>xi</i> SC-AFM6 gray	60-522-01
SC-AFM8 mounting kit*	70-203-01
12VDC, 1.0A external power supply kit	70-055-01
RGB 400 <i>xi</i> Series User's Manual	68-542-01
-or- RGB 470 <i>xi</i> Series User's Manual	68-661-01
RGB 460 <i>xi</i> SC Series Installation Guide	68-636-01

* SC-AFM8 does not include the power supply, RGB 400*xi* Series User's Manual, or RGB 470*xi* Series User's Manual.

Accessories

Accessories	Part number
3.5 mm stereo plug	10-306-01
Mac/VGA adapter (VGA male, Mac female, Mac RGBS, 1')	26-340-01
Mac HV/VGA adapter (VGA male, Mac female, Mac RGBHV, 1')	26-340-02
Mac 35/VGA 6' adapter (15-pin male Mac II, 15-pin HD male VGA)	26-287-01
SY VGA/XGA adapter (15-pin male to 5 BNC male, 6')	26-173-01
SY 15 HDM RGBHVF (15-pin male VGA to 5 BNC female, 2')	26-397-01

Cables

Male-to-male VGA cables	Part number
VGA M6' MHR	26-238-01
VGA M3' MHRA (with audio)	26-490-01
VGA M6' MHRA (with audio)	26-490-02
VGA M12' MHRA (with audio)	26-490-03

Male-to-male 90° VGA cables	Part number
VGAM 90 MHRA 6' (with audio)	26-510-02

Adapter kits	Part number
Mac 15-pin HD F adapter cable kit w/audio	70-156-01
13W3 15-pin HD F adapter cable kit w/audio	70-157-01

High-resolution cables	Part number
BNC-5-3'HR	26-260-15
BNC-5-6'HR	26-260-01
BNC-5-12'HR	26-260-02
BNC-5-25'HR	26-260-03
BNC-5-50'HR	26-260-04
BNC-5-75'HR	26-260-16
BNC-5-100'HR	26-260-05
BNC-5-3'HRP (plenum)	26-378-01
BNC-5-6'HRP (plenum)	26-378-02
BNC-5-12'HRP (plenum)	26-378-03
BNC-5-25'HRP (plenum)	26-378-04
BNC-5-50'HRP (plenum)	26-378-05
BNC-5-75'HRP (plenum)	26-378-06
BNC-5-100'HRP (plenum)	26-378-07
Bulk installation cable (14-conductor, non-plenum), 500' HR	22-120-02
Bulk installation cable (17-conductor, plenum), 500' HR	22-111-03

